# Grand Canyon Monitoring and Research Center Sponsored Projects for FY 1998

## **Aquatic Biology**

## Project Title/PI(s)

Monitoring the Rainbow Trout Fishery of the Colorado River Downstream from Glen Canyon Dam to Lee's Ferry in Glen Canyon National Recreation Area / William R. Persons, Ted McKinney, and Timothy L. Hoffnagle, Arizona Game and Fish Department, 2221 West Greenway Road, Phoenix, AZ 85023, 602/942-3375.

Monitoring and Studies of the Native Fishes in the Colorado Ecosystem in Grand Canyon / Owen T. Gorman, Brian R. Lubinski, Charles O. Minckley, and Chester R. Figiel, Jr., U.S. Fish and Wildlife Service, Arizona Fishery Resources Office, P.O. Box 338, Flagstaff, AZ 86002, 520/556-7456.

Monitoring the Aquatic Food Base in the Colorado River, Arizona, during Fiscal Years 1998 and 1999 / Dean W. Blinn and Joseph P. Shannon, Department of Biological Sciences, Northern Arizona University, Flagstaff, AZ 86001, 520/523-1740.

# Terrestrial Biology

#### Project Title/PI(s)

Monitoring Southwestern Willow Flycatcher, Riparian Breeding Avifauna and Overwintering Avifauna along the Colorado River from Glen Canyon Dam to Lake Mead / John R. Spence and Tim Tibbetts, National Park Service, Glen Canyon National Recreation Area, 691 Scenic View Drive, Page AZ 86040, 520/608-6267.

Monitoring Wetland and Riparian Vegetation Along the Colorado River Ecosystem between Glen Canyon Dam and Lake Mead / Tina J. Ayers and Michael J.C. Kearsley, Department of Biological Sciences, Northern Arizona University, Flagstaff, AZ 86001, 520/523-2381.

Kanab Ambersnail at Vaseys Paradise, Grand Canyon National Park: 1998 Monitoring and Research / Vicky J. Meretsky, SWCA, Inc., Environmental Consultants, 114 N. San Francisco Street, Flagstaff AZ 86001, 812/855-7802.

# Conceptual Modeling

## Project Title/PI(s)

Dévelop an Adaptive Environmental Assessment Model for the Colorado River Ecosystem / Josh Korman and Carl Walters, Ecometric Research Inc., 3320 W 5th Ave., Vancouver, B.C. V6R 1R7, 604/737-8324.

## Physical Science

## Project Title/PI(s)

An Integrated Historical Analysis of Flow, Sediment Transport, and Channel-side Sediment Storage Between Lees Ferry and Middle Granite Gorge in Grand Canyon / J.C. Schmidt, Box 5240, Geography Dept., Utah State University, Logan, UT 84322-5240, 801/797-1791.

Monitoring Changes in Fine-Grained Sediment Deposits through the Colorado River Ecosystem in Glen, Marble, and Grand Canyons during FY 1998 and 1999 / R.A. Parnell, Geology Dept. Box 4099, Northern Arizona University, Flagstaff, AZ 86011, 520/523-3329.

Estimates of Sediment Input From Ungaged Tributaries in Grand Canyon, Arizona: The Relative Importance of Streamflow and Debris Flow / R.H. Webb, U.S. Geological Survey, Water Resources Division, 1675 W. Anklam Rd., Tucson, AZ 85745, 520/670-6821.

Developing Predictive Capabilities for Estimating Fine-Sediment Inputs from the Little Colorado River to the Colorado Rive Ecosystem / D.J. Topping, Geological Survey, Water Resources Division, Box 25046, Denver Federal Center, MS-413, Lakewood, CO 80225-0046, 303/236-4998.

Monitoring and Research of Streamflow, Sediment Transport, and Water Quality in the Colorado River, Glen Canyon Dam to Lake Mead / Anderson, et al., U.S. Geological Survey, Water Resources Division, 520 N. Park Ave., Tucson, AZ 85719, 520/670-6671 (ext. 222).

#### **Cultural Resources**

#### Project Title/PI(s)

A Cultural Resource Data Synthesis Within the Colorado River Ecosystem / D. Gilpin, L. Neal, E. Skinner. SWCA, Inc, 114 N. San Francisco Street, Suite 100, Flagstaff, Az. 86001. 520/779-5500.

# Cultural Resources (continued)

Modeling of Mainstem Flow and Sediment Dynamics at Selected Cultural Resource Locations / S. Wiele. USGS, Water Resources Division, 3215 Marine Street, Boulder, Co. 80303. 303/541-3001.

Test and Apply a Geomorphic Model Related to Erosion of Pre-Dam River Terraces in the Colorado River Ecosystem Containing Cultural Materials / K. Thompson, A. Potochnik. SWCA, Inc, 114 N. San Francisco Street, Suite 100, Flagstaff, Az. 86001. 520/779-5500.

#### Socioeconomic

# Project Title/PI(s)

A Recreation Opportunity Spectrum for the Colorado River Ecosystem in Grand Canyon. / W. Stewart, R. Manning, J.Taylor. University of Illinois at Urbana-Champaign, Department of Leisure Studies, 104 Huff Hall, 1206 South Fourth Street, Champaign, Ill. 61820, 217/244-4532.